

## Zoom lens, and its manufacturing method

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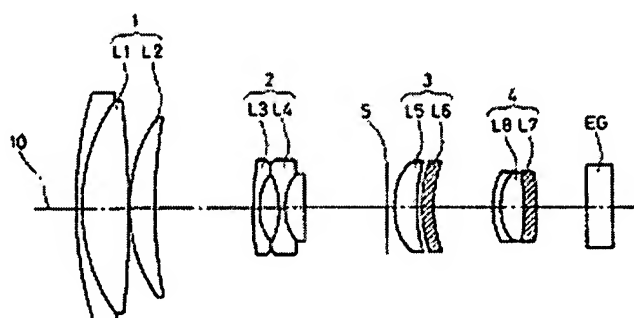
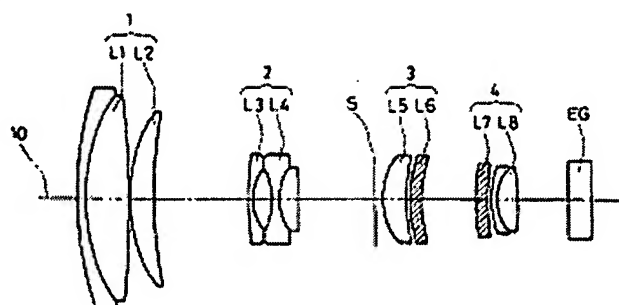
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A zoom lens includes a first lens group (1) having a positive refracting force that is fixed, a second lens group (2) having a negative refracting force that is movable along an optical axis and provided with a function of varying magnification, a third lens group (3) having a positive refracting force that is fixed, and a fourth lens group (4) having a positive refracting force that is movable along an optical axis and provided with a function of correcting fluctuations of an image plane resulting from varying magnification or changing an object distance (4), the first, second, third and fourth lens groups being disposed from an object side in this order, wherein the third lens group (3) and the fourth lens group (4) both include a positive glass spherical lens (L5, L8) and a plastic aspherical lens (L6, L7) having weaker refracting power. Thus, a compact zoom lens having a high magnification ratio of 20 times can be obtained at low cost.



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